

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

b1 defining a correspondence between the divided key ranges and said plurality of data storage areas.

41. A database management method according to claim 40, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

42. A database management method according to claim 41, further comprising the step of:

storing the data corresponding to said at least one divided key range to the data storage area whose correspondence with said one divided key range is defined.

43. A database management method according to claim 41, further comprising the step of:

deleting data corresponding to said divided key range from said data storage area corresponding to the key range necessary to be divided.

44. A database management method comprising the steps of:

b1 defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of storage areas.

45. A database management method according to claim 44, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

46. A database management method according to claim 45, further comprising the step of:

storing the data corresponding to said at least one divided key range to the data storage area whose correspondence with said one divided key range is defined.

47. A database management method according to claim 45 further comprising the step of:

b1 deleting data corresponding to said divided key range from said data storage area correspondence to the key range to which the request is inputted to divide.

48. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

49. A database management method according to claim 48, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

50. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

b1 dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

51. A database management method according to claim 50, further comprising the step of:

defining a correspondence of at least one of said divided key ranges to a data storage area whose correspondence with a key range is not defined.

52. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which
corresponding to a key range containing said data, when
storing said data in a database;

including an information indicating an additional
key range into a received request, when said request is
received to add a key range; and

defining a correspondence between said additional
key range and a data storage area.

53. A database management method comprising the steps
of:

defining a correspondence between a plurality of key
ranges and a plurality of data storage areas in a storage
device;

storing data in a data storage area which
corresponds to a key range containing said data, when storing
said data in a database;

including into a request, an information indicating
a first key range which is to be divided, an information
indicating a dividing value for dividing said first key range,
a first and a second data storage areas for storing data
corresponding to the divided first key range, when said
request is received to divide a key range;

dividing said first key range, into a second key
range which covers the range not greater than said dividing

value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

54. A database management method comprising the steps of:

b1 defining a correspondence between a plurality of key ranges and a plurality of key ranges and a plurality of data storage means in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

55. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

56. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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57. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

58. A database management method comprising the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

b1 deleting the information defining the correspondence between the data storage area correspondence to the key range to be deleted and said key range to be deleted.

59. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

60. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

b1 means for dividing said key range containing said data in a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

61. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for dividing at least one of said plurality of key ranges, when necessary to divide; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

62. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

means for defining a correspondence between the divided key ranges and said plurality of data storage areas.

63. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

b' means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including an information indicating an additional key range into a received request, when said request is received to add a key range; and

means for defining a correspondence between said additional key range and a data storage area.

64. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the dividing first key range, when said request is received to divide a key range;

b' means for dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

means for defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

65. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for storing in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

means for including an information indicting a key range to be deleted into a received request, when said request is received to delete key range; and

means for deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

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A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

means for dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

means for defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

means for defining a correspondence between said merged key range and a data storage area.

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~~69~~. A database management system comprising:

means for defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

means for including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

means for deleting the information defining the correspondence between the data storage area correspondence to the key range to be deleted and said key range to be deleted.

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~~70~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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1. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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~~22~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

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defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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~~23~~. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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74. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating an additional key range into a received request, when said request is received to add a key range; and

defining a correspondence between said additional key range and a data storage area.

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75. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storage data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

76. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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77. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

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78. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicting a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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79. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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80. A computer readable storage medium storing a database management program, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

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81. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when it is necessary to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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41/ 2. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

dividing said key range containing said data into a plurality of divided key ranges, when a request is inputted to divide said key range containing said data; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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~~82~~ 3. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

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dividing at least one of said plurality of key ranges, when necessary to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

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~~83~~ 4. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

dividing at least one of said plurality of key ranges, when a request is inputted to divide; and

defining a correspondence between the divided key ranges and said plurality of data storage areas.

~~45~~ 85. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

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including an information indicating an additional key range into a received request, when said request is received to add a key range; and

defining a correspondence between said additional key range and a data storage area.

~~45~~ 86. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

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87. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicating a plurality of key ranges into a received request, when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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88. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

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defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

storing data in a data storage area which corresponds to a key range containing said data, when storing said data in a database;

including an information indicting a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.

~~88~~ 89. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including into a request, an information indicating a first key range which is to be divided, an information indicating a dividing value for dividing said first key range, a first and a second data storage areas for storing data corresponding to the divided first key range, when said request is received to divide a key range;

dividing said first key range, into a second key range which covers the range not greater than said dividing value, and into a third key range which covers the range not smaller than said dividing value; and

defining a correspondence between said second key range and said first data storage area, and between said third key range and said second data storage area.

~~89~~ 90. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a plurality of key ranges into a received request when said request is received to merge key ranges;

merging said plurality of key ranges into a merged key range; and

defining a correspondence between said merged key range and a data storage area.

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91. A database management program stored on a computer readable storage medium, said program when executed causes a computer to perform the steps of:

defining a correspondence between a plurality of key ranges and a plurality of data storage areas in a storage device;

including an information indicating a key range to be deleted into a received request, when said request is received to delete a key range; and

deleting the information defining the correspondence between the data storage area corresponding to the key range to be deleted and said key range to be deleted.--